What is claimed is:

1. A re-fueling station for selectively dispensing fuel in the form of liquefied gas or compressed gas, said re-fueling station comprising:

(a) a storage tank within which liquefied gas may be stored;

(b) a dispensing system comprising:

a first dispenser for dispensing compressed gas;

a second dispenser for dispensing liquefied gas;

a heat exchanger operable to transfer heat to the fuel;

a flow diverter operable to receive fuel through an inlet and selectively direct fuel through one of a first outlet or a second outlet;

conduits through which fuel may flow from said first outlet to said heat exchanger and then to said first dispenser, or from said second outlet to said second dispenser; and

(c) a positive displacement fuel pump operable to draw fuel from said storage tank and discharge fuel to said inlet of said flow diverter, wherein said pump is selectively operable in:

a low speed mode when fuel flow is directed to said first dispenser to deliver compressed gas; and

a high speed mode when fuel flow is directed to said second dispenser to deliver liquefied gas, whereby said fuel pump operates with a higher number of cycles per minute compared to when said fuel pump is operated in said low speed mode.

2. The re-fueling station of claim 1 wherein said pump is a reciprocating piston pump that can pump liquefied gas, vapor, or a mixture of liquefied gas and vapor.

3. The re-fueling station of claim 2 wherein said reciprocating piston fuel pump is driven by at least one hydraulic cylinder.

4. The re-fueling station of claim 3 wherein one of two hydraulic cylinders is selectable to drive said reciprocating piston fuel pump, wherein a first cylinder is operated when said low speed mode is selected, and a second cylinder, which has a smaller displacement than said first cylinder, is operated when said high speed mode is selected.

5. The re-fueling station of claim 4 wherein one hydraulic pump supplies hydraulic fluid selectively to one of said two hydraulic cylinders, whereby one hydraulic cylinder is operable while the other hydraulic cylinder is idle.

6. The re-fueling station of claim 5 wherein said hydraulic pump is a variable speed pump.

7. The re-fueling station of claim 2 wherein said reciprocating piston fuel pump is a double-acting fuel pump.

8. The re-fueling station of claim 7 wherein said reciprocating piston fuel pump comprises:

a first compression chamber associated with a fuel pump inlet;

a one-way inlet valve positioned in said fuel pump inlet for allowing fluid flow into said first compression chamber;

a second compression chamber associated with a fuel pump discharge port;

a reciprocable piston assembly comprising a shaft connected to a drive mechanism and a piston head that separates said first compression chamber from said second compression chamber; and

a one-way transfer valve positioned in fluid passages communicating between said first and second compression chambers, said one-way transfer valve allowing fluid flow from said first compression chamber into said second compression chamber.

9. The re-fueling station of claim 8 wherein the displaced volume of said first compression chamber is larger than the displaced volume of said second compression chamber.

10. The re-fueling station of claim 9 wherein the displaced volume of said first compression chamber is about two times the displaced volume of said second compression chamber.

11. The re-fueling station of claim 8 wherein said one-way transfer valve is disposed within said piston assembly.

12. The re-fueling station of claim 8 wherein the shaft of said piston assembly is vertically aligned.

13. The re-fueling station of claim 8 wherein the shaft of said piston assembly is inclined with the lower end of said pump associated with said one-way inlet valve.

14. The re-fueling station of claim 12 or 13, wherein said fuel pump further comprises a fluid recovery chamber above said first and second compression chambers for collecting fuel and returning it to a sump which is in fluid communication with said fuel pump inlet.

15. The refueling station of claim 14 wherein said fuel is returned to said sump from said recovery chamber through an open drain port located near the bottom of said recovery chamber.

16. The re-fueling station of claim 8 wherein said fuel pump is operable with a negative net suction head.

17. The re-fueling station of claim 16 wherein said storage tank is buried underground.

18. The re-fueling station of claim 1 further comprising an accumulator vessel disposed between said heat exchanger and said first dispenser.

19. A method of operating a re-fueling station to selectively supply liquefied gas or compressed gas, said method comprising:

(a) drawing liquefied gas from a cryogenic storage tank to a reciprocating piston fuel pump;

(b) operating said fuel pump in a low speed mode when fuel is directed from said fuel pump to a heat exchanger for transferring heat to said liquefied gas and then a compressed gas dispenser; and

(c) operating said fuel pump in a high speed mode when fuel is directed from said fuel pump to a liquefied gas dispenser, wherein in said high speed mode, said fuel pump operates with a higher number of cycles per minute than when said fuel pump is operating in said low speed mode.

20. The method of claim 19 wherein said fuel pump is operable at speeds between 5 and 30 cycles per minute.

21. The method of claim 19 wherein said fuel pump preferably operates between about five and twelve cycles per minute when said low speed mode is selected and at between about ten and twenty cycles per minute when said high speed mode is selected.

22. The method of claim 21 wherein said fuel pump operates at about six cycles per minute when said low speed mode is selected and at about eighteen cycles per minute when said high speed mode is selected.

23. The method of claim 19, further comprising capturing fuel that leaks from compression chambers within said fuel pump and returning such fuel to a sump in fluid communication with an inlet of said fuel pump.

24. The method of claim 19 wherein said fuel pump is operable with a negative net suction head.

25. The method of claim 24 wherein said cryogenic storage tank is buried underground.

26. The method of claim 19 further comprising driving said fuel pump with a first hydraulic cylinder when said low speed mode is selected and driving said fuel pump with a second hydraulic cylinder when said high-speed mode is selected.

27. The method of claim 26 wherein said first hydraulic cylinder has a larger displacement volume than that of said second hydraulic cylinder.

28. The method of claim 19 further comprising operating said fuel pump in said high speed mode during a cool down procedure for reducing the temperature of said fuel pump, and, during said cool down procedure returning vapor from said fuel pump to said cryogenic storage tank.

29. A method of operating a re-fueling station to selectively supply liquefied gas or compressed gas, said method comprising:

(a) drawing liquefied gas from a cryogenic storage tank to a reciprocating piston fuel pump;

(b) selectively driving said fuel pump with a first hydraulic cylinder when fuel is directed from said fuel pump to a heat exchanger for transferring heat to said liquefied gas, and then to a compressed gas dispenser;

(c) selectively driving said fuel pump with a second hydraulic cylinder when fuel is directed from said fuel pump to a liquefied gas dispenser, wherein said second hydraulic cylinder has a smaller displaced volume than that of said first hydraulic cylinder; and

(d) supplying hydraulic fluid from a hydraulic pump system to the selected one of said first or second hydraulic cylinders.

30. The method of claim 29 wherein said hydraulic pump system comprises a single hydraulic pump.

31. The method of claim 29 further comprising selectively driving said fuel pump with said second hydraulic cylinder during a cool down procedure when said fuel pump is being cooled.

32. The method of claim 31 further comprising returning vapor from said pump to the vapor space of said cryogenic storage tank during said cool down procedure.